What is claimed is:

1. A remaining film thickness determining method employed in a polishing process, comprising:

a measuring process including,

a first step of forming a predetermined coated film on a semiconductor substrate;

a second step of forming on the coated film resist patterns each having a plurality of line/space pattern blocks in which at least one of line widths and space widths are different from one another;

a third step of etching the surfaces of the coated film and the semiconductor substrate with the resist patterns as masks to thereby form trenches;

a fourth step for removing the resist patterns and thereafter forming a buried insulating film which charges the interiors of the trenches and covers the surface of the coated film;

a fifth step of polishing the surface of the buried insulating film so as to expose the surface of the coated film; and

a sixth step of measuring remaining film thicknesses of the coated film subsequent to said fifth step, at a plurality of measuring points; and

a computing process including,

a seventh step of conceptually defining each of reference regions each having a predetermined shape

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and area in the surface of the semiconductor substrate
such that each of the measuring points is placed in the
center thereof;

an eighth step of computing a ratio between an area
of the reference region and a gross area of the lines
lying in the reference region;

a ninth step of determining a relationship between
a result of measurement in said sixth step and a result
of computation in said eighth step; and

a tenth step of determining an anticipated
remaining film thickness of the coated film at an
arbitrary point of an actually fabricated semiconductor
device on the basis of the relationship determined in
said ninth step.

2. The remaining film thickness determining method
according to claim 1, wherein the coated film is a
laminated film having a protective oxide film formed on
the semiconductor substrate and a silicon nitride film
formed on the protective oxide film.

3. The remaining film thickness determining method
according to claim 1, wherein the polishing process is a
chemical mechanical polishing process.

4. The remaining film thickness determining method
according to claim 1, wherein the reference regions are

defined so as to straddle *a* the plurality of line/space pattern blocks.

5. The remaining film thickness determining method according to claims 1, wherein the gross area of the lines is calculated after the line widths are corrected so as to approximate convex pattern widths of the buried insulating film formed in said fourth step, and the computation of said eighth step is performed using the result of calculation.

6. A remaining film thickness determining method employed in a polishing process, comprising:

a measuring process including,

forming a predetermined coated film on a semiconductor substrate;

forming on the coated film resist patterns each having a plurality of line/space pattern blocks in which at least one of line widths and space widths are different from one another;

etching the surfaces of the coated film and the semiconductor substrate with the resist patterns as masks to thereby form trenches;

removing the resist patterns and thereafter forming a buried insulating film which charges the interiors of the trenches and covers the surface of the coated film;

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polishing the surface of the buried insulating film so as to expose the surface of the coated film; and

measuring remaining film thicknesses of the coated film subsequent to said polishing process, at a plurality of measuring points; and

a computing process including,

conceptually defining each of reference regions each having a predetermined shape and area in the surface of the semiconductor substrate such that each of the measuring points is placed in the center thereof;

an eighth step of _using a computer and_ computing a ratio between an area of t*h*e reference region and a gross area of t*h*e lines lying in the reference region;

determining a relationship between a result of measurement in said remaining film measuring process and a result of computation in said ratio computing process; and

determining an anticipated remaining film thickness of the coated film at an arbitrary point of an actually fabricated semiconductor device on the basis of the relationship determined in said relationship determining process.

7. The remaining film thickness determining method according to claim 6, wherein the coated film is a laminated film having a protective oxide film formed on

the semiconductor substrate and a silicon nitride film formed on the protective oxide film.

8. The remaining film thickness determining method according to claim 6, wherein the polishing process is a chemical mechanical polishing process.

9. The remaining film thickness determining method according to claim 6, wherein the reference regions are defined so as to straddle the plurality of line/space pattern blocks.

10. The remaining film thickness determining method according to claims 6, wherein the gross area of the lines is calculated after the line widths are corrected so as to approximate convex pattern widths of the buried insulating film formed in said resist patterns removing process, and the computation of said ratio computing process is performed using the result of calculation.